

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

2
292.9
3 Wat



U. S. DEPT. OF AGRICULTURE
NATIONAL AGRICULTURAL LIBRARY

JUL 22 1964

CURRENT SERIAL RECORDS

WATER SUPPLY OUTLOOK and **FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS** for **IDAHO**

UNITED STATES DEPARTMENT of AGRICULTURE--SOIL CONSERVATION SERVICE,
and
IDAHO STATE RECLAMATION ENGINEER

Data included in this report were obtained by the agency named above in cooperation with the Comptroller of Water Rights of British Columbia, and Federal, State and private organizations listed on the last page of this report.

||||||| AS OF |||||
MAR. 1, 1964

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Water Supply Outlook Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from advance estimates of the streamflow.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, up to 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

Streamflow forecasts are obtained by a comparison of total or maximum snow accumulation, as measured by snow water equivalent, to the subsequent spring and summer or snowmelt season runoff over a period of years. The snow water equivalent measured in selected snow courses provides most of the index to the streamflow forecast for the following season. More accurate forecasts are usually obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast procedure. Early season forecasts assume average climatic conditions through the snowmelt season.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions. Soil Conservation Service Reports may be secured from Water Supply Forecasting Unit, Soil Conservation Service, P.O. Box 2807, Portland, Oregon 97208.

PUBLISHED BY SOIL CONSERVATION SERVICE

<u>REPORTS</u>	<u>ISSUED</u>	<u>LOCATION</u>	<u>COOPERATING WITH</u>
RIVER BASINS			
WESTERN UNITED STATES _____	MONTHLY (FEB.-MAY) _____	PORTLAND, OREGON _____	ALL COOPERATORS
BASIC DATA SUMMARY _____	OCTOBER 1 _____	PORTLAND, OREGON _____	ALL COOPERATORS
STATES			
ALASKA _____	MONTHLY (MAR.-MAY) _____	PALMER, ALASKA _____	ALASKA S.C.D.
ARIZONA _____	SEMI-MONTHLY _____ (JAN.15 - APR.1)	PHOENIX, ARIZONA _____	SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
COLORADO AND NEW MEXICO _____	MONTHLY (FEB.-MAY) _____	FORT COLLINS, COLORADO _____	COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO _____	MONTHLY (JAN.-JUNE) _____	BOISE, IDAHO _____	IDAHO STATE RECLAMATION ENGINEER
MONTANA _____	MONTHLY (JAN.-JUNE) _____	BOZEMAN, MONTANA _____	MONT. AGR. EXP. STATION
NEVADA _____	MONTHLY (JAN.-MAY) _____	RENO, NEVADA _____	NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES - DIVISION OF WATER RESOURCES
OREGON _____	MONTHLY (JAN.-JUNE) _____	PORTLAND, OREGON _____	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH _____	MONTHLY (JAN.-JUNE) _____	SALT LAKE CITY, UTAH _____	UTAH STATE ENGINEER
WASHINGTON _____	MONTHLY (FEB.-JUNE) _____	SPOKANE, WASHINGTON _____	WN. STATE DEPT. OF CONSERVATION
WYOMING _____	MONTHLY (FEB.-JUNE) _____	CASPER, WYOMING _____	WYOMING STATE ENGINEER

PUBLISHED BY OTHER AGENCIES

<u>REPORTS</u>	<u>ISSUED</u>	<u>AGENCY</u>
BRITISH COLUMBIA _____	MONTHLY (FEB.-JUNE) _____	WATER RESOURCES SERVICE, DEPT. OF LANDS, FOREST AND WATER RESOURCES, PARLIAMENT BLDG., VICTORIA, B.C., CANADA
CALIFORNIA _____	MONTHLY (FEB.-MAY) _____	CALIF. DEPT. OF WATER RESOURCES, P.O. BOX 388, SACRAMENTO, CALIF.

WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
IDAHO

Report prepared by

MORLAN W. NELSON Snow Survey Supervisor

and

J. ALDEN WILSON Asst. Snow Survey Supervisor

SOIL CONSERVATION SERVICE
SNOW SURVEY SECTION
BOX 1247, BOISE, IDAHO

Issued by

LEE T. MORGAN
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
BOISE, IDAHO

CARL E. TAPPAN
STATE RECLAMATION ENGINEER
DEPARTMENT OF RECLAMATION
BOISE, IDAHO

WATER SUPPLY OUTLOOK for IDAHO



GENERAL SUMMARY - MARCH 1, 1964

The water supply outlook for Idaho took a significant drop during the month of February. Snow-water contents on the high mountainous areas fell from 10% to 40% in relation to normal. Precipitation in the valleys took a similar drop and prevailing temperatures were below normal for the month. Forecasts of streamflow throughout Idaho now vary from 55% of normal on the Bear River at Harer to 108% for the Big Lost River at Howell Ranch. In general, the April through September streamflow for the major rivers in the state are forecast to flow 10% to 20% below an average year.

Snowfall has continued to follow an unusual pattern this season. Valley and foothill areas have an extremely heavy snow cover for this time of the year while the high mountainous terrain has a snow pack well below normal. There have been so many years of light snow cover that it is difficult to evaluate our return to a near normal trend. Fortunately, at the valley and foothill elevations, south slope snow cover has melted off up to the 5,000 foot level or slightly higher. The snow cover on the north and level slopes, below 5,000 ft., still have a very heavy water content which has continued to build throughout the season.

Soil moisture sites indicate unfrozen soils beneath the snow pack throughout the state. The insulating effect of snow cover has resulted in soil temperatures varying from 32 degrees to 38 degrees. This includes the valley and foothill elevations where there is more than twelve to fifteen inches of snow remaining. The unfrozen soil is a very desirable condition because the soil can slow down runoff by absorbing melting snow or rain.

Several times during the past two winters, frozen soil has been a major factor in the fast heavy runoff occurring from snow-melt and rain. On all streams originating in the foothills, where a relatively heavy snow pack still remains, the snow poses a hazard, although somewhat reduced by February melting and the unfrozen soil. If a normal spring snow-melt occurs, these relatively large volumes of water in the valley and foothill areas can runoff evenly over a long period and not create problems. On the other hand, if Chinook winds or unseasonably warm weather should occur suddenly, accompanied by rain, heavy flows would occur on many streams which ordinarily flow very little or nothing.

February is normally one of the heaviest months for snowfall. Light snowfall in the high mountainous terrain during the past month has changed the water outlook significantly. Normal or greater than normal snowfall in March is necessary to bring streamflow up to near average for 1964. The combination of stored water and good soil moisture can, in many cases, make up for the expected deficiencies in streamflow.

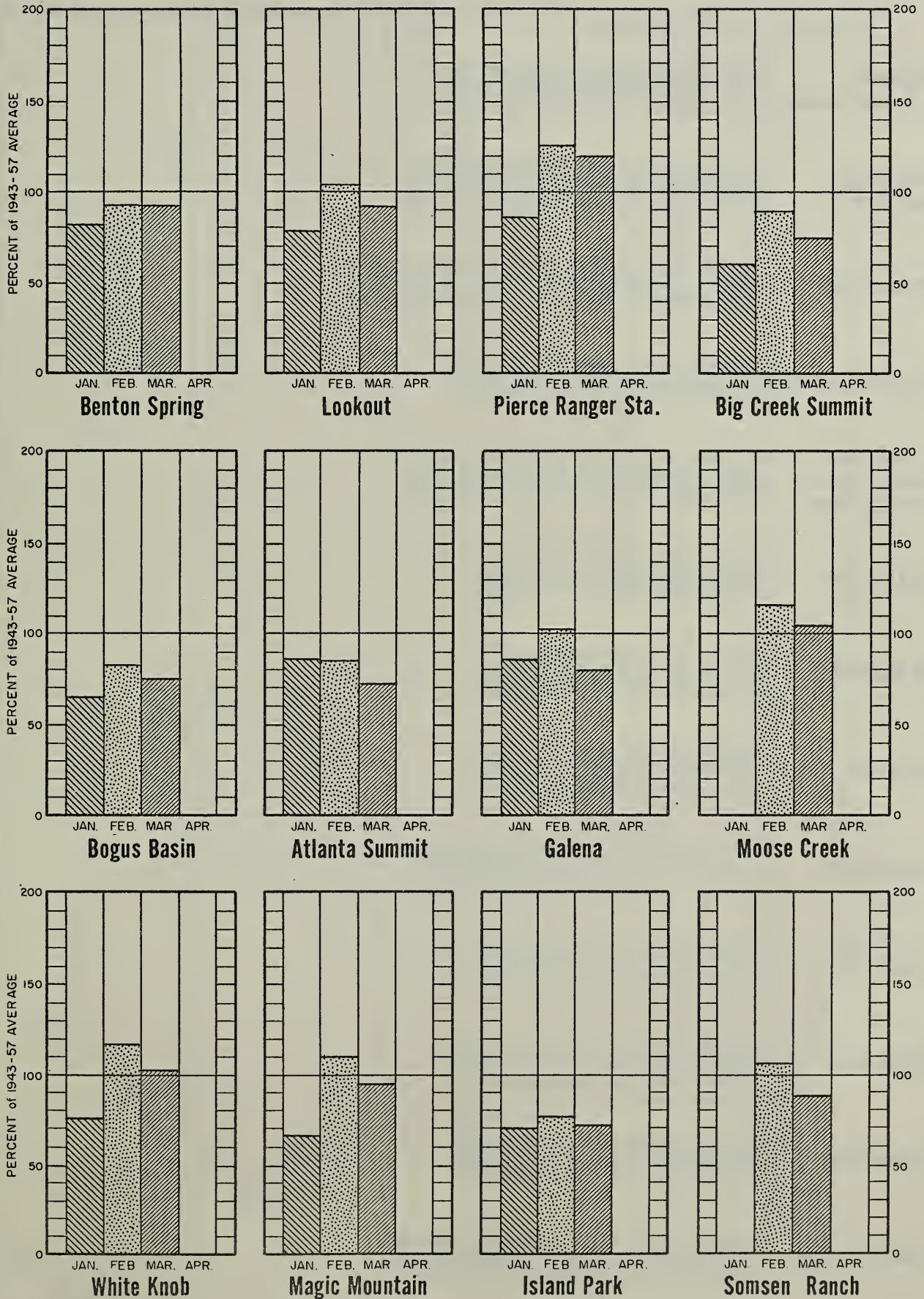
Reservoir-stored water throughout the state is generally good although, in several cases, slightly below normal for this time of the year. These exceptions are the Bear Lake, Oakley and Owyhee Reservoirs. Good streamflow forecasts for the Owyhee River indicate one of the best situations occurring there in the past five to ten years. The Bear River is below normal in stored water and has an unusually low inflow forecast.

SNOW WATER DEPTHS ACCUMULATION

For Selected Snow Courses

As Compared To 1943-57 15Yr. Average

MARCH 1, 1964



SNOW WATER DEPTHS

BY DRAINAGE

Compared To The 1943 - 57 15 Yr. Average

Snow Cover as of Approximately

MARCH 1, 1964

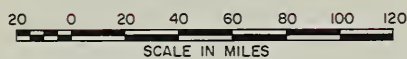


SNOW WATER DEPTHS

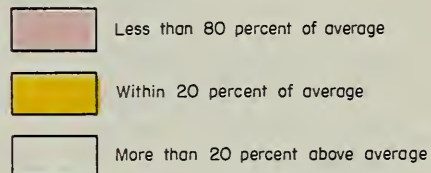
As percent of 1943-57 15 year average

MARCH 1, 1964

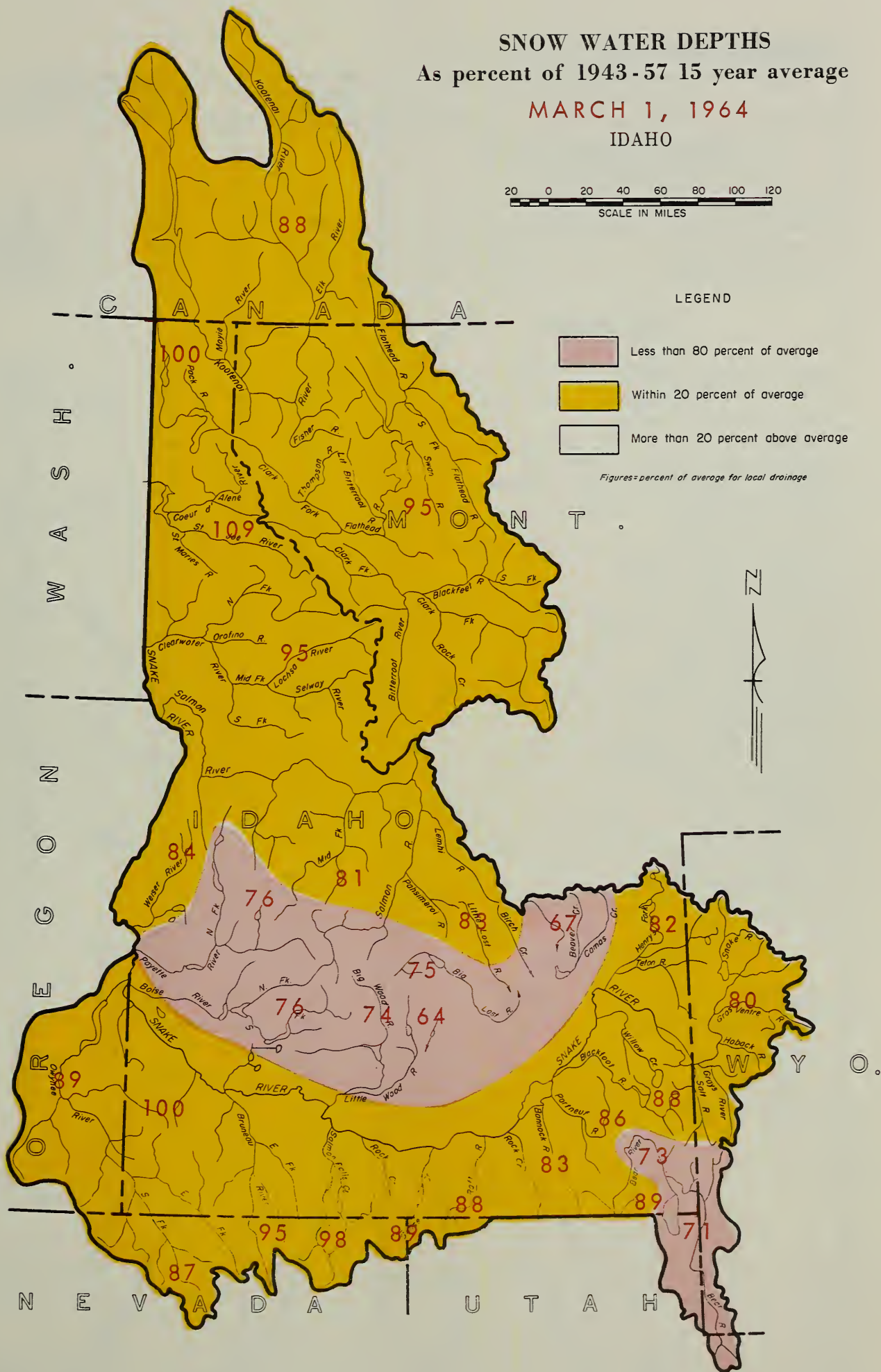
IDAHO



LEGEND



Figures=percent of average for local drainage



COMPARISON of SNOW COVER

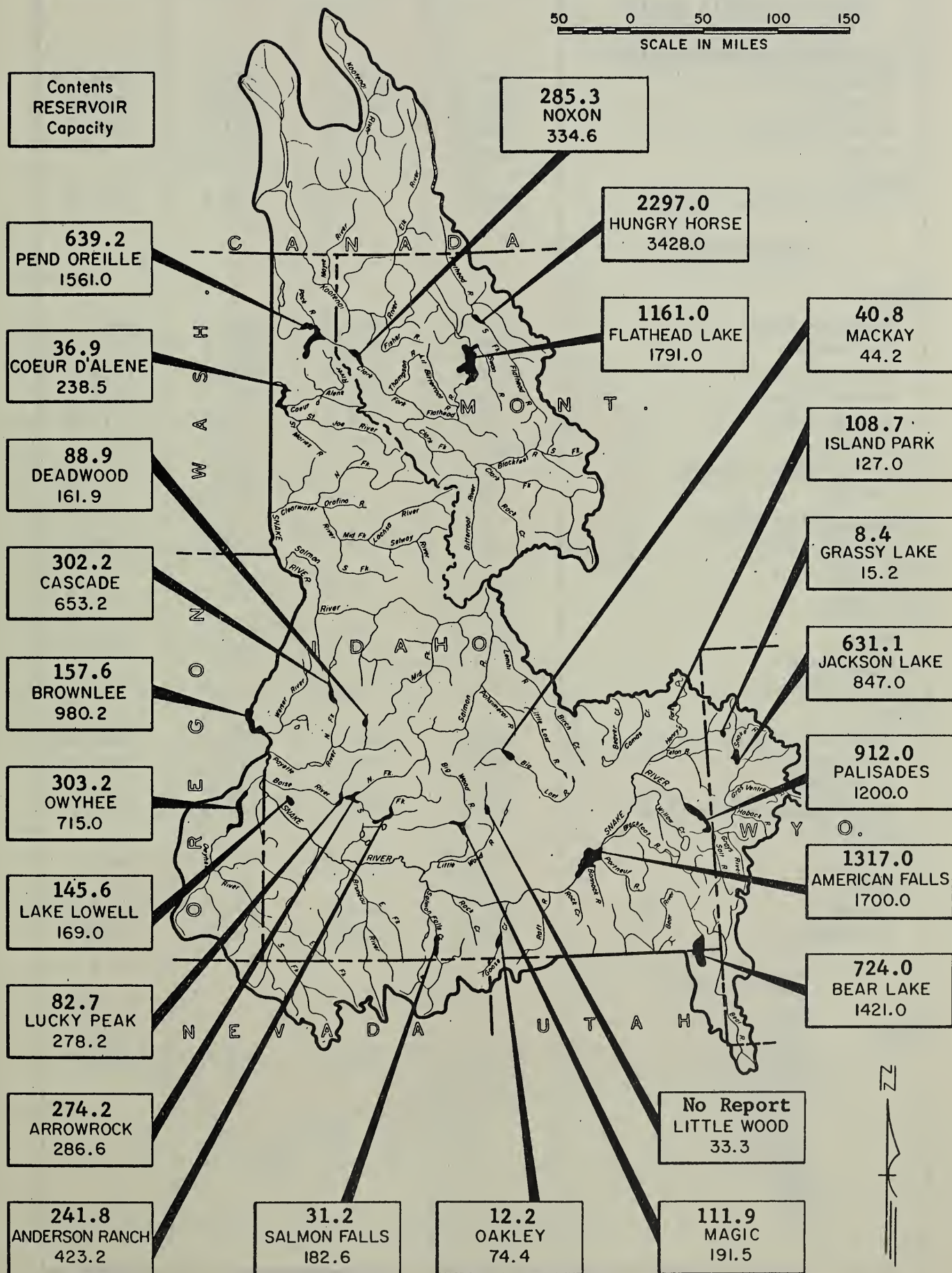
RIVER BASIN WATERSHED	NO. OF COURSES AVERAGED	THIS YEARS SNOW WATER EXPRESSED AS PERCENT OF :	
		LAST YEAR	AVERAGE <i>b</i>
<u>UPPER COLUMBIA BASIN</u>			
Kootenai River	11	134	88
Pend Oreille - Clark Fork River	40	130	95
Priest River	2	327	100
Spokane River	3-11	198	109
<u>SNAKE BASIN</u>			
Upper Snake River	21	123	80
Mud Lake Drainages	2-4	207	67
Henry's Fork River	3-7	146	82
Teton River	2-3	161	75
Blackfoot River	3	256	88
Portneuf River	3	201	86
Raft River	2-7	210	88
Goose Creek	2-3	203	89
Salmon Falls Creek	9-11	253	98
Bruneau River	7	215	95
Little Lost River	5	254	83
Big Lost River	5-10	130	75
Big Wood River	7	114	74
Little Wood River	3-6	120	64
Boise River	7-9	168	76
Owyhee River-Nevada	9	472	87
Owyhee River-Idaho	2-10	506	100
Payette River	9	170	76
Weiser River	2-4	182	84
Salmon River	11-14	135	81
Lemhi River	4	145	--
Clearwater River	7-15	170	95
Palouse	5	215	154
<u>GREAT BASIN</u>			
Bear River	13	148	71
Montpelier Creek	2-6	141	93
Mink Creek	2-6	142	73
Cub River	2	380	89
Malad River	2	291	83

RESERVOIR STORAGE

USABLE CONTENTS (1,000 Acre Feet)

MARCH 1, 1964

50 0 50 100 150
SCALE IN MILES

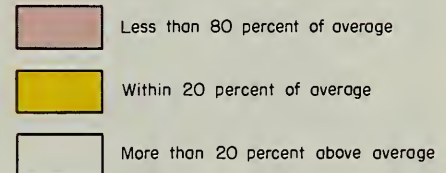


RESERVOIR STORAGE (1,000 Ac. Ft.)

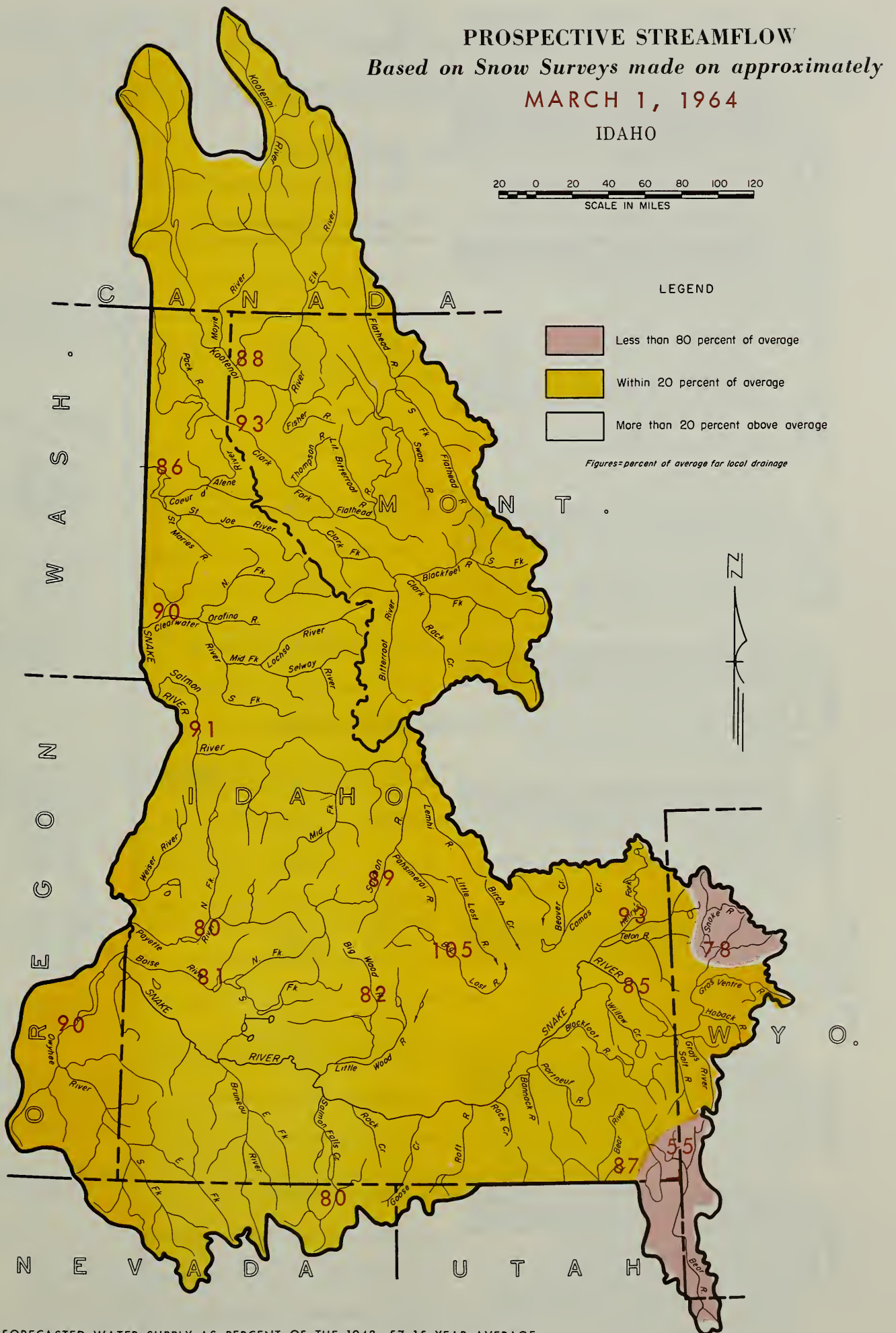
RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943 - 57 AVERAGE
<u>UPPER COLUMBIA BASIN</u>				
<u>Clark Fork - Pend Oreille</u>				
Hungry Horse	3428.0	2297.0	2772.0	2369.0*
Flathead	1791.0	1161.0	1126.0	768.2
Pend Oreille	1561.0	639.2	663.9	540.9
Noxon	334.6	285.3	297.9	--
<u>Spokane</u>				
Coeur d'Alene	238.5	36.9	158.9	131.9
<u>SNAKE BASIN</u>				
<u>Snake</u>				
Jackson Lake	847.0	631.1	581.7	465.5
Palisades	1200.0	912.0	1003.3	--
American Falls	1700.0	1317.0	1482.4	1425.8
Island Park	127.0	108.7	132.3	116.7
Grassy Lake	15.2	8.4	11.8	13.0
Brownlee	980.2	157.6	768.2	--
<u>Goose-Trapper Creeks</u>				
Oakley	74.4	12.2	17.4	18.5
<u>Salmon Falls Creek</u>				
Salmon Falls	182.6	31.2	37.2	29.6
<u>Big Lost</u>				
Mackay	44.2	40.8	33.9	33.8
<u>Big Wood</u>				
Magic	191.5	111.9	172.2	128.2
<u>Little Wood</u>				
Little Wood	33.3	No Report	21.9	--
<u>Boise</u>				
Anderson Ranch	423.2	241.8	304.7	183.2*
Arrowrock	286.6	274.2	274.4	196.8
Lucky Peak	278.2	82.7	144.0	--
Lake Lowell (Deer Flat)	169.0	145.6	147.4	110.2
<u>Owyhee</u>				
Owyhee	715.0	303.2	343.5	473.1
<u>Payette</u>				
Cascade	653.2	302.2	579.5	207.6*
Deadwood	161.9	88.9	96.8	83.3
<u>GREAT BASIN</u>				
<u>Bear</u>				
Bear Lake	1421.0	724.0	761.4	815.6

IDAHO

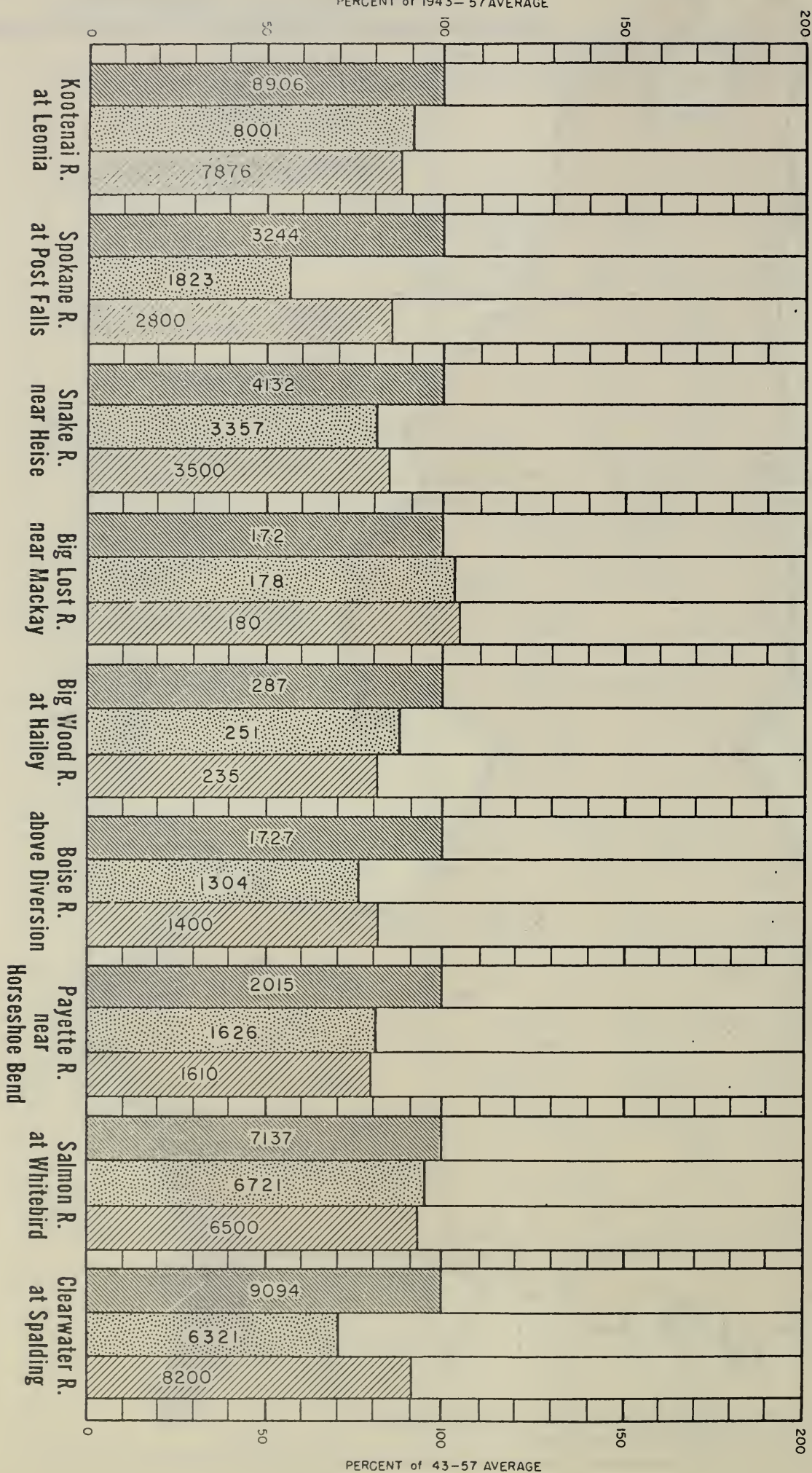
LEGEND



Figures=percent of average for local drainage



PERCENT of 1943-57 AVERAGE



STREAMFLOW FORECASTS (April through September period)

Based on Snow Surveys made on approximately

MARCH 1, 1964

15 Yr. Average Flow 1943-57

This Year's Forecast

Last Years Flow

Flow in Thousands of Acre Feet

WATER SUPPLY OUTLOOK (expressed as "Poor", "Fair", "Average" or "Excellent")^a and **STREAMFLOW FORECASTS** (1,000 Ac. Ft.)^c

STREAM and/or FORECAST POINT		OUTLOOK	FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE
UPPER COLUMBIA BASIN						
KOOTENAI RIVER						
Leonia	(at)	Avg.	7876	Apr-Sep	8907	88
			6823	Apr-Jul	7817	87
			5450	Apr-Jun	6255	87
PEND OREILLE RIVER						
Clark Fork River						
Whitehorse Rapids	(at)	Avg.	13000	Apr-Sep	13932	93
			11800	Apr-Jul	12763	93
			10190	Apr-Jun	10816	94
Priest River						
Priest River 1/	(nr)	Avg.	900	Apr-Jul	904	99
SPOKANE RIVER						
Post Falls 2/	(at)	Avg.	2800	Apr-Sep	3242	86
Coeur d'Alene River						
Cataldo	(nr)		1200	Apr-Sep	1322	91
			1170	Apr-Jul	1263	93
St. Joe River						
Calder	(at)		1190	Apr-Sep	1391	86
			1160	Apr-Jul	1323	88
SNAKE RIVER BASIN						
SNAKE RIVER - MAIN STEM						
Moran 3/	(at)		720	Apr-Sep	928	78
Heise 4/	(nr)	Avg.	3500	Apr-Sep	4132	85
Blackfoot 5/	(nr)		3600	Apr-Jul	4239	85
Weiser	(at)		6200	Apr-Sep	7725	80
Henry's Fork						
Ashton 6/	(nr)	Avg.	590	Apr-Sep	632	93
Rexburg 7/	(nr)		1200	Apr-Sep	1318	91
Teton River						
St. Anthony	(nr)	Avg.	360	Apr-Sep	425	85
Blackfoot River						
Blackfoot		Avg.	110	Apr-Sep	--	--
Reservoir Inflow						
Portneuf River						
Topaz	(at)	Avg.	70	Mar-Sep	--	--

(a) Includes seasonal runoff, stored water, diversions and other sources. (c) Assuming normal meteorological conditions. 1/ Observed flow corrected for storage in Priest Lake. 2/ Observed flow corrected for storage in Coeur d'Alene Lake and diversions by Spokane Valley Farms Company and Rathdrum Prairie canals. 3/ Corrected for storage in Jackson Lake. 4/ Corrected for storage in Jackson Lake and Palisades. 5/ Corrected for storage in Jackson Lake, Palisades, Island Park, Henry's Lake, Grassy Lake and diversions between Heise and Blackfoot. 6/ Corrected for storage in Henry's Lake and Island Park Reservoir. 7/ Corrected for storage in Henry's Lake, Island Park, Grassy Lake and diversions between Ashton and Rexburg.

WATER SUPPLY OUTLOOK (expressed as "Poor", "Fair" ^a and "Average" or "Excellent") and STREAMFLOW FORECASTS (1,000 Ac. Ft.) ^c

STREAM and/or FORECAST POINT		OUTLOOK	FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE
<u>Salmon Falls Creek</u>						
San Jacinto	(nr)	Fair	70	Mar-Sep	88	80
			68	Mar-Jul	85	80
<u>Bruneau River</u>						
Hot Springs	(nr)	Avg.	200	Mar-Sep	235	85
<u>Little Lost River</u>						
Howe	(nr)	Avg.	39	Mar-Sep	37.5	104
<u>Big Lost River</u>						
Howell Ranch	(at)	Avg.	150	Apr-Jun	139	108
Mackay <u>1/</u>	(nr)		180	Apr-Sep	172	105
<u>Big Wood River</u>						
Hailey <u>2/</u>	(at)	Avg.	280	Apr-Sep	340	82
Magic Reservoir						
Inflow <u>3/</u>			250	Mar-Jul	309	81
<u>Little Wood River</u>						
High Five Creek	(ab)	Fair	70	Apr-Sep	87	80
<u>Boise River</u>						
Twin Springs	(nr)		670	Apr-Sep	791	85
			625	Apr-Jul	737	85
Boise <u>4/</u>	(nr)	Avg.	1400	Apr-Sep	1727	81
<u>South Fork</u>						
Anderson Dam <u>5/</u>	(at)		485	Apr-Sep	646	75
<u>Owyhee River</u>						
Gold Cr., Nev. <u>6/</u>	(nr)		23	Apr-Jul	26.8	85
Owyhee, Nev. <u>6/</u>	(nr)		70	Apr-Jul	86.3	81
Lake Owyhee		Avg.	385	Apr-Sep	430	90
net inflow <u>7/</u>				Mar-Jul	524	94
<u>Payette River</u>						
Horseshoe Bend <u>8/</u>	(nr)	Avg.	1610	Apr-Sep	2016	80
<u>North Fork</u>						
Cascade <u>9/</u>	(at)		495	Apr-Sep	618	80
Banks <u>9/</u>	(nr)		635	Apr-Sep	793	80
			615	Apr-Jul	765	80
<u>South Fork</u>						
Banks <u>10/</u>	(nr)		860	Apr-Jul	1077	80

(a) Includes seasonal runoff, stored water, diversions and other sources. (c) Assuming normal meteorological conditions. 1/ Observed flow corrected for storage in Mackay Reservoir and diversion in Sharp Ditch. 2/ Combined discharge of Big Wood River and Big Wood Slough corrected for diversions. 3/ Combined flow Big Wood River nr. Bellevue and Camas Creek nr. Blaine. 4/ Corrected for storage in Arrowrock, Anderson Ranch and Lucky Peak. 5/ Corrected for storage in Anderson Ranch Reservoir. 6/ Corrected for storage in Wild Horse Reservoir. 7/ From U.S.B.R. records of inflow. 8/ Corrected for storage in Cascade and Deadwood Reservoirs. 9/ Corrected for storage in Cascade Reservoir. 10/ Corrected for storage in Deadwood Reservoir.

WATER SUPPLY OUTLOOK (expressed as "Poor", "Fair" ^a and **STREAMFLOW FORECASTS** (1,000 Ac. Ft.) ^c

STREAM and/or FORECAST POINT		OUTLOOK	FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE
<u>Weiser River</u>						
Weiser ab. Crane Creek <u>1/</u>		Avg.	520	Mar-Sep	575	90
<u>Salmon River</u>						
Whitebird	(at)	Avg.	6500	Apr-Sep	7137	91
Challis	(nr)		850	Apr-Sep	959	89
			755	Apr-Jul	839	90
<u>Clearwater River</u>						
Spalding	(at)	Avg.	8200	Apr-Sep	9094	90
Kamiah	(at)		4700	Apr-Jul	4901	92
<u>North Fork</u>						
Ahsahka	(nr)		2810	Apr-Jul	3086	91
<u>GREAT BASIN</u>						
<u>BEAR RIVER</u>						
Harer	(at)	Poor	165	Apr-Sep	299	55
<u>Montpelier Creek</u>						
Montpelier	(nr)	Avg.	11.5	Apr-Sep	13.1	88
<u>Cub River</u>						
Preston	(nr)	Avg.	45	Apr-Sep	52	87

(a) Includes seasonal runoff, stored water, diversions and other sources. (c) Assuming normal meteorological conditions. 1/ Observed flow of Weiser River nr. Weiser minus observed flow of Crane Creek at mouth.

VALLEY PRECIPITATION 1/

Division Averages and Departures In Inches

DRAINAGE DIVISIONS	Fall		Winter	
	Sep.-Oct.-Nov. 1963		Dec. 1963-Feb. 1964	
	Observed	Departure <u>2/</u>	Observed	Departure <u>2/</u>
Kootenai, Canada & U. S.	7.28	+1.19	6.79	-2.02
Flathead	4.34	-0.87	4.67	-1.50
Clark Fork	3.40	+0.50	2.51	-0.15
Pend Oreille-Spokane	8.05	-0.78	9.06	-2.42
Upper Snake	6.51	+1.68	5.28	-1.46
Snake River Plain	3.00	+0.90	1.98	-0.75
Salmon-Payette-Boise	5.39	+0.68	5.69	-1.86
Clearwater	5.46	-1.24	7.28	-1.05
Southeastern Oregon	3.32	+0.95	2.52	-0.94

1/ Preliminary analysis by U. S. Weather Bureau from data furnished by Meterological Service of Canada and U. S. Weather Bureau.

2/ Departure from 15-year (1943-57) drainage division average.

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE ^b

UPPER COLUMBIA BASINPRIEST RIVER

Benton Meadow	16A2	2344	2/27	26	7.8	0.4	6.5
Benton Spring	16A3	4900	2/28	52	19.0	7.8	20.4
Schweitzer Bowl	16A6	4500	2/27	85	29.2	--	--
Schweitzer Ridge	16A5	6100	2/27	106	41.2	--	--

SPOKANE RIVER

Copper Ridge	16B2	4800	3/2	85	32.1	10.4	27.2
Fourth of July Smt.	16B3	3100	2/27	39	13.0	T	--
Granite Peak	15B13	6000	2/25	95	34.5	28.5	--
Kellogg Peak (A)	16B5	5560	2/26	85	30.3	7.7	--
Lookout	15B2	5250	2/27	89	31.7	19.3	34.0*
Lower Sands Creek	16B1	3400	3/2	65	22.8	7.0	18.5*
Medicine Ridge	15B4	6150	2/25	102	35.1	33.3	--
Mosquito Ridge (A)	16A4	5110	2/26	107	38.1	19.6	--
Outlaw Creek	15B12	3750	2/25	47	14.4	4.9	--
Roland Summit (A)	15B5	5200	3/26	96	34.2	13.8	--
Sherwin	16C1	3200	2/29	53	18.4	3.7	--
Sunset (A)	15B9	5600	2/26	104	37.0	18.0	--

SNAKE BASINMEDICINE LODGE - MUD LAKE DRAINAGES

Camp Creek	12E3	6800	2/26	26	5.7	3.0	9.2
Irving Creek	12E4	7035	2/27	20	4.2	1.9	--
Kilgore	11E12	6200	2/28	28	6.9	3.6	9.5
Webber Creek	12E5	6700	2/27	17	3.1	1.1	--

HENRY'S FORK - TETON RIVER

Big Springs	11E9	6500	2/26	53	14.9	9.2	20.4
Darby Canyon (A)	10F21	8250	2/28	55	17.8	11.7	--
Island Park	11E10	6315	2/27	43	11.1	7.6	15.7
Latham Springs	11E16	7650	2/25	76	23.0	15.6	--
Lucky Dog	11E14	6900	2/25	55	15.6	12.2	--
Old Road	11E15	7250	2/25	67	20.2	14.8	--
Pine Creek Pass	11F2	6750	2/28	43	13.3	7.7	--
Poacher's Cabin	11E17	8000	2/25	79	25.7	17.8	--
State Line	11F1	6400	2/28	41	12.2	5.9	13.8
Teton Pass	10F13	8500	2/28	67	21.7	14.6	31.7*
Valley View	11E8	6500	2/27	50	14.8	8.6	13.8*

(b) 1943-57, 15 year period. # Not located directly on this drainage. * Estimated 1943-57, 15 year Average.
 (A) Aerial observation: Water content estimated.

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE ^b

BLACKFOOT - PORTNEUF RIVERS

Austin Bros Ranch	11G3	6450	2/28	31	7.2	2.0	7.1*
China Hat	11G2	6300	2/27	25	5.8	T	7.6*
Dempsey Creek	12G5	6280	2/28	32	8.2	4.2	9.8*
Mink Creek	12G1	6300	2/27	45	12.9	6.2	14.2*
Pebble Creek	12G2	6550	2/28	37	10.8	5.5	13.0*
Slug Creek Divide	11G5	7225	2/25	43	12.0	11.2	--
Somsen Ranch	11G1	7000	2/27	37	9.6	6.8	10.9*

RAFT RIVER, GOOSE CREEK, SALMON FALLS CREEK, BRUNEAU RIVER

Badger Gulch	14G3	6660	2/28	34	9.7	2.7	11.7*
Bear Creek	15H1	7800	2/27	51	12.8	9.4	16.9*
Bostetter R. S.	14G1	7500	2/28	49	16.6	8.9	17.7*
Boy Scout Camp	13G2	7600	2/28	36	10.5	7.4	--
Cedar Creek	14G5	7000	2/27	37	11.2	T	10.3*
Clear Creek Meadows	13H2	9050	2/29	48	14.2	9.7	--
Deadline	14G4	6900	2/27	60	19.8	9.0	19.9*
Fox Creek	15H2	6800	2/27	35	10.2	2.3	9.4*
Goat Creek	15H13	8800	2/27	47	13.9	10.1	15.7*
Howell Canyon	13G1	8000	2/28	56	19.4	10.9	24.3*
Hummingbird Springs	15H15	8945	2/27	56	16.9	9.2	18.3*
Magic Mountain	14G2	6700	2/29	50	16.4	7.1	17.1*
One Mile Summit	13H1	7330	2/29	25	6.8	3.3	--
Pole Creek R. S.	15H14	8330	2/27	55	16.5	8.7	16.0*
Red Point (A)	15H18	7940	2/27	42	12.6	1.5	--
Sheep Hollow	13G5	6200	2/28	22	6.7	1.5	--
Shoshone Basin	14G6	5740	2/27	28	8.6	T	4.7*
Sublett	13G3	6000	2/29	36	11.1	2.5	10.5*
Summit Springs	13G4	8500	2/29	33	9.8	2.1	--
Vi Pont	13H3	7650	2/29	32	9.0	5.8	--
Wilson Creek (A)	15G2	7500	2/27	44	13.2	2.9	--

LITTLE LOST RIVER

Fairview Guard Sta.	13E5	5850	2/27	26	5.8	1.2	5.6*
Lost-Garfield	13E3	5700	2/27	19	3.8	T	4.9*
Moonshine	13E6	7250	2/27	36	9.6	5.0	11.5*
Sawmill Canyon	13E4	6000	2/27	28	6.5	3.2	9.3*
Wet Creek Summit	13E7	8175	2/26	35	8.9	4.2	10.4*

(b) 1943-57, 15 year period. # Not located directly on this drainage. * Estimated 1943-57, 15 year Average.
 (A) Aerial observation: Water content estimated.

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE ^b

BIG LOST RIVER

Bear Canyon	13F3	8600	2/28	42	12.3	9.0	16.6*
Cherry Creek Pass (A)	13F13	8900	2/28	5	1.2	1.6	--
Copper Basin	13F2	8000	2/28	22	6.7	4.0	9.2
Iron Bog	13F11	7650	2/28	35	10.4	6.4	--
Leadbelt	13F12	6800	2/28	25	6.4	4.3	--
Lost-Wood Divide (A)	14F3	8750	2/28	51	16.0	14.9	22.9*
North Fork Meadow (A)	14F15	8150	2/28	28	8.5	6.1	--
Slickrock (A)	13F14	8640	2/28	38	11.1	11.1	--
Stickney Mill	14F2	7500	2/28	24	5.8	5.2	8.8
White Knob	13F1	7700	2/25	28	8.1	4.1	7.9

BIG WOOD RIVER

Dollarhide Summit	14F8	8620	2/28	49	17.4	17.8	23.8*
Galena	14F1	7500	2/29	47	14.0	11.4	17.6*
Galena Summit	14F12	8795	2/29	55	17.2	14.9	20.3*
Graham Ranch	14F5	6200	2/26	35	10.4	9.0	12.9
Mascot Mine	14F7	7900	2/27	31	9.5	8.4	14.2*
Mount Baldy	14F9	9000	2/26	47	13.6	10.6	18.2*
Soldier Rgr. Sta.	14F11	6100	2/29	25	6.4	5.2	12.3*

Little Wood River - Fish Creek

Garfield R. S.	13F4	6554	2/24	27	6.6	5.7	10.9*
Iron Mine Creek	13F10	6370	2/25	27	6.9	6.3	--
Muldoon	13F5	6300	2/24	22	5.6	5.8	8.4*
Porcupine (A)	14F14	8350	2/28	44	12.4	9.6	--
Swede Peak	13F9	7500	2/25	40	11.3	9.4	--
Telfer Ranch	13F6	6000	2/25	22	5.4	3.4	8.1*

BOISE RIVER

Atlanta Summit	15F4	7500	2/25	66	23.4	22.0	31.9*
Bad Bear	15F2	5500	2/28	39	12.1	0.0	--
Bennett Mountain	15F7	6650	2/26	48	15.6	7.2	--
Bogus Basin Road	16F4	5360	2/27	27	9.4	0.0	6.7*
Camas Creeks Divide(A)	15F9	5720	2/26	33	10.7	T	--
Danskin (A)	15F10	5650	2/26	39	12.7	1.2	--
Jackson Peak (A)	15E9	7000	2/25	66	21.0	17.5	30.6*
Little Camas Flat (A)	15F12	4950	2/26	29	9.4	0.0	--
Long Tom (A)	15F13	4550	2/26	24	7.8	0.0	--
Moores Creek Summit	15F1	6100	2/28	69	22.0	12.7	30.4
Prairie	15F6	5600	2/28	27	6.3	0.0	6.5*

(b) 1943-57, 15 year period. # Not located directly on this drainage. * Estimated 1943-57, 15 year Average.
 (A) Aerial observation: Water content estimated.

APPENDIX

4

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE ^b

Road Creek (A)	15F3	6800	2/25	36	11.2	2.1	11.6*
Trinity Mountain	15F5	7400	2/25	72	26.4	26.4	40.8*
Willow Creek Cabin (A)	15F11	4710	2/26	21	6.8	0.0	--

OWYHEE RIVER

Antelope Ridge	16G6	5900	2/26	27	8.5	0.0	--
Battle Creek (A)	16G9	5700	2/27	25	6.8	0.0	--
Bear Creek	15H1	7800	2/27	51	12.8	9.4	16.9*
Bull Basin (A)	16G10	5600	2/27	6	1.6	0.2	--
Fox Creek	15H2	6800	2/27	35	10.2	2.3	9.4*
Hyde Pasture	16G5	5800	2/26	23	7.2	0.0	--
Mud Flat	16G7	5500	2/26	27	7.3	0.0	--
Red Canyon (A)	16G11	6650	2/27	27	7.3	0.6	--
Silver City	16F3	6400	3/1	49	14.1	1.4	14.8*
South Mountain	16G1	6340	2/26	36	12.0	1.6	11.4
Succor Creek (A)	16F6	6100	2/27	27	7.8	0.4	--
Triangle	16G4	5150	2/26	8	2.8	0.0	--

PAYETTE RIVER

Big Creek Summit	15E2	6608	2/28	71	24.0	20.3	31.7*
Bogus Basin	16F2	6120	2/28	50	16.8	9.0	21.8*
Cozy Cove	15E8	5900	2/26	39	12.1	4.3	16.3*
Crawford R. S.	15E3	4800	2/28	28	7.0	0.0	7.4*
Deadwood Airstrip	15E10	5440	2/27	38	12.0	3.6	--
Deadwood Dam	15E7	5500	2/26	38	11.8	5.0	16.4*
Deadwood Summit	15E4	7000	2/25	85	30.8	25.8	43.0*
Greenfield Flat (A)	16E7	7370	2/27	87	29.4	28.7	--
High Valley Summit	16E4	5170	2/28	39	11.9	2.3	--
Lake Fork	15E1	6000	2/25	49	14.6	5.5	15.8*
Rock Flat Summit	16E1	5200	2/25	46	13.5	6.6	17.1*
Silver Creek Ridge	15E5	5700	2/25	44	15.0	--	--
Squaw Meadow	15D2	5800	2/27	78	25.0	14.9	34.2*
Tripod Summit	16E3	5200	2/25	48	15.7	5.2	--

WEISER RIVER

Boulder Creek	16D1	5500	2/27	51	17.3	9.4	20.2*
Mica Ridge (A)	16E6	6800	2/27	71	24.1	15.2	--
Placer Creek	16E2	6000	2/27	45	12.6	7.1	15.4*
Squaw Flat (A)	16E5	6230	2/27	60	20.3	9.1	--

(b) 1943-57, 15 year period. # Not located directly on this drainage. * Estimated 1943-57, 15 year Average.
 (A) Aerial observation: Water content estimated.

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE ^b

SALMON RIVER

Big Creek Summit	15E2	6608	2/28	71	24.0	20.3	31.7*
Borah (A)	13E8	8250	3/3	23	5.8	--	--
Chapman Creek	16D2	4215	2/27	18	5.0	0.0	2.3*
Deadwood Summit	15E4	7000	2/25	85	30.8	25.8	43.0*
Galena Summit	14F12	8795	2/29	55	17.2	14.9	20.3*
Gibbons Pass	13D2	7100	2/26	63	18.8	16.6	22.2
Johns Creek	16D3	3805	2/27	8	2.5	0.0	2.8*
Mill Creek Summit	14E1	8870	3/2	54	16.0	13.7	--
Moose Creek	13D16	6200	2/27	52	16.2	8.5	15.4
Morgan Creek Summit	14E4	7580	2/29	40	10.2	8.4	--
Redfish Lake	14E2	6600	3/2	32	8.3	--	--
Rock Flat Summit	16E1	5200	2/25	46	13.5	6.6	17.1*
Twin Peaks (A)	14E3	10300	3/3	64	18.8	11.8	--
Vienna Mine (A)	14F4	8900	2/29	63	19.7	20.1	31.4*
Whitebird Summit	16D5	4390	2/27	27	7.8	0.4	4.8*
Williams Creek Smt.	14D4	7800	2/28	32	9.6	7.9	12.0*

Lemhi River

Above Gilmore	13E19	8200	2/26	30	7.2	6.2	--
Aspen-Hall Pass	13E21	8110	2/27	29	6.0	--	--
Copes Camp	13E17	7500	2/27	28	5.2	5.0	--
Gertson Creek (A)	13D17	8050	2/28	32	8.0	2.0	--
Hall Creek	13E20	7560	2/27	18	3.6	--	--
Meadow Lake	13E18	9100	2/26	52	14.5	10.8	--

CLEARWATER RIVER

Above Greer	16C11	1240	2/29	0	0.0	0.0	--
Cayuse Airstrip	15C3	3700	2/26	40	13.4	4.6	11.9*
Coolwater Mountain	15C7	6200	2/26	70	24.4	--	--
Crater Meadows	15C9	6100	2/26	98	37.5	22.7	--
Elk Butte	16C15	5550	2/25	105	38.5	13.3	--
Fish Lake Airstrip	15C2	5000	2/26	105	35.4	21.2	39.5*
Forest	16C9	4550	2/25	27	7.1	0.0	--
Forty-nine Meadows	15B3	5000	2/25	83	30.3	13.9	33.0*
Goat Lake	14C9	6600	2/26	105	38.1	35.6	--
Granite Peak	15B13	6000	2/25	95	34.5	28.5	--
Greer Summit	16C13	3000	2/29	0	0.0	0.0	--
Hemlock Butte	15C6	5500	2/26	126	47.4	26.0	--
Lolo Pass	14C5	5230	2/27	76	28.4	17.5	32.9*
Lost Lake	15B14	6000	2/25	124	49.4	31.8	--
McCann	16C8	4300	2/25	22	6.0	0.0	--
Medicine Ridge	15B4	6150	2/25	102	35.1	--	--

(b) 1943-57, 15 year period. # Not located directly on this drainage. * Estimated 1943-57, 15 year Average.
 (A) Aerial observation: Water content estimated.

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE ^b

Midway	16C12	2200	2/29	0	0.0	0.0	--
Nez Perce Pass	14D1	6575	2/27	49	16.0	9.0	16.8*
Orogrande Mountain	15D4	7800	2/26	90	32.0	--	--
Pierce Rgr. Sta.	15C5	3171	2/26	43	13.2	4.0	11.0*
Powell Rgr. Sta.	14C6	4230	2/27	42	15.0	7.3	14.6*
Savage Pass	14C4	6600	2/28	64	22.4	18.6	--
Shanghai Summit	15C4	4600	2/26	75	26.3	8.8	--
Sweeney	16C10	4435	2/25	22	5.8	0.0	--

PALOUSE RIVER

Crumarine Creek	16C6	3500	2/28	33	11.2	0.0	6.7*
East Twin	16C3	4000	2/28	49	19.5	0.0	11.4*
Howard Creek	16C5	3500	2/28	31	10.2	0.0	3.3*
Moscow Mountain	16C2	4800	2/28	58	20.2	3.5	16.6*
West Twin	16C4	4200	2/28	40	14.0	0.0	10.7*

GREAT BASINBEAR RIVER

Emigrant Summit	11G6	7350	2/25	56	15.4	14.6	--
Emigration Canyon	11G7	6500	2/25	28	7.2	6.7	--

Montpelier Creek

Giveout	11G16	6840	2/24	36	9.1	5.9	--
Little Beaver	11G20	6970	2/24	43	13.6	8.6	--
Montpelier Creek	11G18	6570	2/24	24	6.1	4.1	--
Whiskey Flat	11G21	6985	2/24	24	7.5	4.5	--

Mink Creek

Christensen Ranch	11G11	5600	2/26	28	7.1	0.0	--
Dry Basin (A)	11G14	7900	2/29	67	18.4	17.3	--
Horseshoe Basin (A)	11G15	8000	2/29	56	15.4	19.8	--
Liberty Spring (A)	11G13	8600	2/29	85	23.4	16.1	--
Strawberry Creek	11G9	5800	2/27	35	8.3	1.3	11.4*
Strawberry-Mink Divide	11G10	6800	2/27	51	14.4	6.8	19.8*

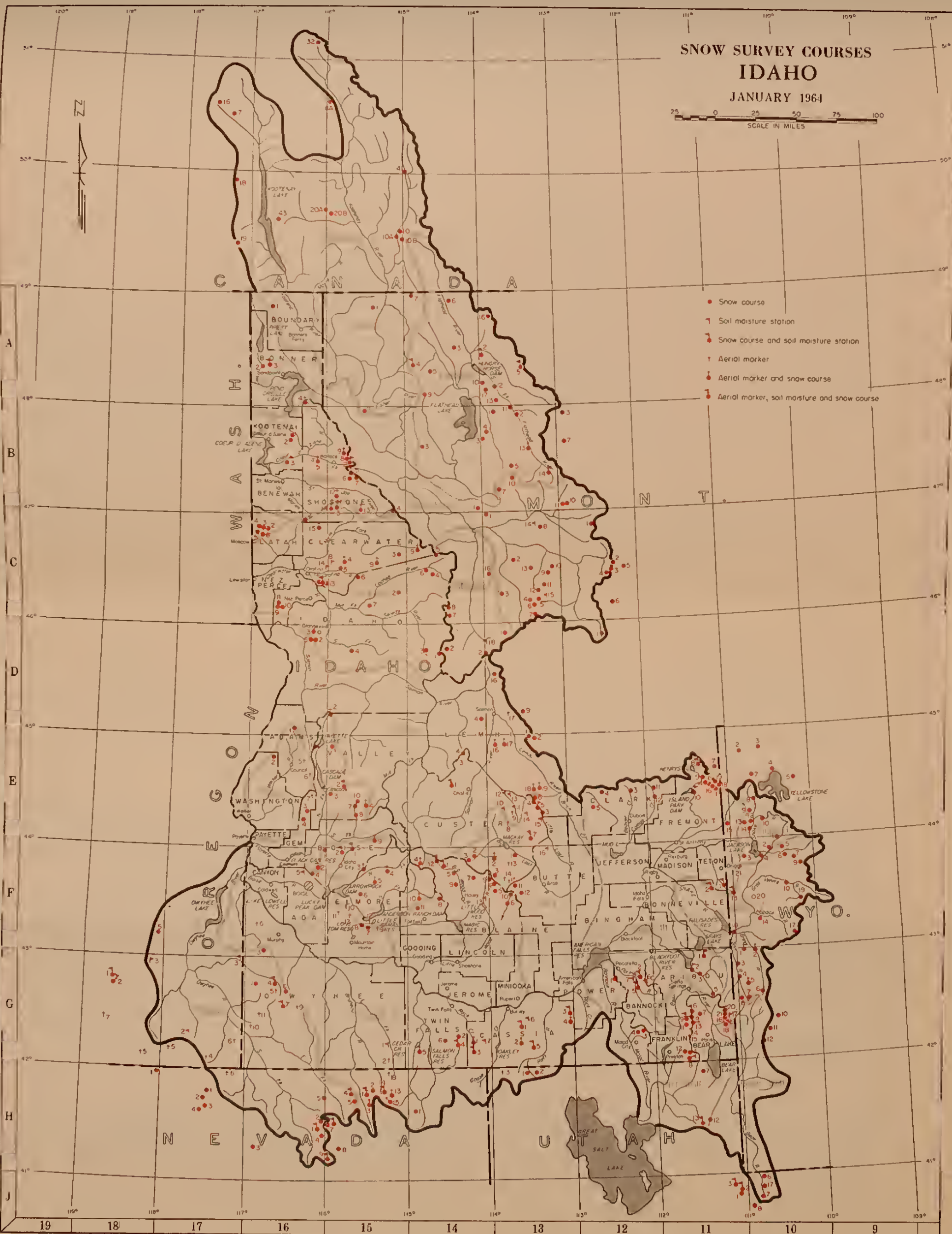
Cub River-Malad River

Cub River R. S.	11G12	5400	2/26	30	8.3	0.0	8.9*
Willow Flat	11G4	6100	2/26	43	12.6	5.5	14.6*
Dry Creek Flat	12G4	6350	2/25	29	7.0	T	7.2*
Oxford Mountain	12G3	6800	2/25	29	6.4	4.6	9.0*

(b) 1943-57, 15 year period. # Not located directly on this drainage. * Estimated 1943-57, 15 year Average.
 (A) Aerial observation: Water content estimated.

JANUARY 1964

JANUARY 1964



Index to IDAHO SNOW COURSES

NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.	NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.	NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.	NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.
			LAT.	AND	LONG.					LAT.	AND	LONG.					LAT.	AND	LONG.				LAT.	AND	LONG.		
KOOTENAI RIVER																											
13511	M	Barre Creek	36	26N	114W	5500	1302A	WY	Blind Bull	6	24N	115W	8750	1302A	I	Savill Canyon	17	12N	26E	6700	1619A	I	Mica Ridge	15	15N	2E	6800
13512	M	Brush Creek	13	20N	114W	5500	1302B	WY	Bryan Flat	9	24N	115W	8750	1302B	I	Wet Creek Summit	15	12N	26E	8175	1619B	I	Squaw Flat	32	17N	22	6200
13513	M	Ferguson	50°10'		114°00'	5500	1302C	WY	Canyon	4	24°42'	110°30'	7250	1302C	I	BIG LOST RIVER					1619C	I	Placer Creek	15	16 17N	34	6500
13514	M	Ferris	49°31'		114°01'	5500	1302D	WY	COO Camp	9	20N	118W	7500	1302D	I	Bear Canyon	26	5N	21E	8500	1619D	I	Above allmore	23	13N	26E	8200
13515	M	Gerrard	49°33'		114°01'	6000	1302E	WY	Coulter Creek	26	34N	116W	6500	1302E	I	Cherry Creek Pass	4	24N	21E	8000	1619E	I	Big Flat	23	11N	23E	7050
13516	M	Gray Creek	49°41'		114°01'	3800	1302F	WY	Deadman Ranch	32	37N	111W	7500	1302F	I	Copper Basin	24	4N	22E	7650	1619F	I	Red	21	10N	23E	3250
13517	M	Hitchcock	49°41'		114°01'	5500	1302G	WY	East Rim Div. de	35	45N	112W	777	1302G	I	Iron Bog	23	4N	21E	8000	1619G	I	Trappan Creek	17	27N	2E	4215
13518	M	Marble Canyon	49°41'		114°01'	6100	1302H	WY	Fire Mile Meadows	12	48N	116W	7200	1302H	I	Leadbelt	34	6N	14E	8700	1619H	I	Copper Camp	3	14N	23E	7500
13519	M	Morrissey Ridge	49°45'		114°01'	3050	1302I	WY	Grays Boundary	33	37N	112W	5900	1302I	I	Lost No. 1 Divide	19	7N	18E	1500	1619I	I	Western Creek	22	22N	42E	8750
13520	M	Nelson	49°45'		114°02'	4100	1302J	WY	Grays Boundary	33	37N	112W	5900	1302J	I	North Fork Meadow	20	7N	18E	1500	1619J	I	Id. S. S. S.	11	6S	16W	8100
13521	M	New Fernie	49°45'		114°02'	4100	1302K	WY	Grays Boundary	33	37N	112W	5900	1302K	I	Slack Creek	17	4N	22E	7400	1619K	I	Jordan Creek	9	24N	2E	3805
13522	M	Red Mountain	49°45'		114°02'	4100	1302L	WY	Grays Boundary	33	37N	112W	5900	1302L	I	Stoney Mill	4	6N	14E	8700	1619L	I	Grass Pass	9	4G	15W	7800
13523	M	Red Mountain	49°45'		114°02'	4100	1302M	WY	Grays Boundary	33	37N	112W	5900	1302M	I	Twin Peaks	17	4N	22E	7400	1619M	I	Lower S. S. S.	9	12N	2E	6500
13524	M	Red Mountain	49°45'		114°02'	4100	1302N	WY	Grays Boundary	33	37N	112W	5900	1302N	I	White Knob	17	4N	22E	7400	1619N	I	Managay Bar	1	1N	23E	7900
13525	M	Red Mountain	49°45'		114°02'	4100	1302O	WY	Grays Boundary	33	37N	112W	5900	1302O	I	BIG WOOD RIVER					1619O	I	Head of Lake	24	13N	26E	9100
13526	M	Red Mountain	49°45'		114°02'	4100	1302P	WY	Grays Boundary	33	37N	112W	5900	1302P	I	Miller Side Summit	16	3N	15E	6200	1619P	I	Miller Creek Summit	2	1N	23E	7900
13527	M	Red Mountain	49°45'		114°02'	4100	1302Q	WY	Grays Boundary	33	37N	112W	5900	1302Q	I	Miller Side Summit	16	3N	15E	6200	1619Q	I	Miller Creek Summit	2	1N	23E	7900
13528	M	Red Mountain	49°45'		114°02'	4100	1302R	WY	Grays Boundary	33	37N	112W	5900	1302R	I	Miller Side Summit	16	3N	15E	6200	1619R	I	Miller Creek Summit	2	1N	23E	7900
13529	M	Red Mountain	49°45'		114°02'	4100	1302S	WY	Grays Boundary	33	37N	112W	5900	1302S	I	Miller Side Summit	16	3N	15E	6200	1619S	I	Miller Creek Summit	2	1N	23E	7900
13530	M	Red Mountain	49°45'		114°02'	4100	1302T	WY	Grays Boundary	33	37N	112W	5900	1302T	I	Miller Side Summit	16	3N	15E	6200	1619T	I	Miller Creek Summit	2	1N	23E	7900
13531	M	Red Mountain	49°45'		114°02'	4100	1302U	WY	Grays Boundary	33	37N	112W	5900	1302U	I	Miller Side Summit	16	3N	15E	6200	1619U	I	Miller Creek Summit	2	1N	23E	7900
13532	M	Red Mountain	49°45'		114°02'	4100	1302V	WY	Grays Boundary	33	37N	112W	5900	1302V	I	Miller Side Summit	16	3N	15E	6200	1619V	I	Miller Creek Summit	2	1N	23E	7900
13533	M	Red Mountain	49°45'		114°02'	4100	1302W	WY	Grays Boundary	33	37N	112W	5900	1302W	I	Miller Side Summit	16	3N	15E	6200	1619W	I	Miller Creek Summit	2	1N	23E	7900
13534	M	Red Mountain	49°45'		114°02'	4100	1302X	WY	Grays Boundary	33	37N	112W	5900	1302X	I	Miller Side Summit	16	3N	15E	6200	1619X	I	Miller Creek Summit	2	1N	23E	7900
13535	M	Red Mountain	49°45'		114°02'	4100	1302Y	WY	Grays Boundary	33	37N	112W	5900	1302Y	I	Miller Side Summit	16	3N	15E	6200	1619Y	I	Miller Creek Summit	2	1N	23E	7900
13536	M	Red Mountain	49°45'		114°02'	4100	1302Z	WY	Grays Boundary	33	37N	112W	5900	1302Z	I	Miller Side Summit	16	3N	15E	6200	1619Z	I	Miller Creek Summit	2	1N	23E	7900
13537	M	Red Mountain	49°45'		114°02'	4100	1303A	WY	Grays Boundary	33	37N	112W	5900	1303A	I	Miller Side Summit	16	3N	15E	6200	1619A	I	Miller Creek Summit	2	1N	23E	7900
13538	M	Red Mountain	49°45'		114°02'	4100	1303B	WY	Grays Boundary	33	37N	112W	5900	1303B	I	Miller Side Summit	16	3N	15E	6200	1619B	I	Miller Creek Summit	2	1N	23E	7900
13539	M	Red Mountain	49°45'		114°02'	4100	1303C	WY	Grays Boundary	33	37N	112W	5900	1303C	I	Miller Side Summit	16	3N	15E	6200	1619C	I	Miller Creek Summit	2	1N	23E	7900
13540	M	Red Mountain	49°45'		114°02'	4100	1303D	WY	Grays Boundary	33	37N	112W	5900	1303D	I	Miller Side Summit	16	3N	15E	6200	1619D	I	Miller Creek Summit	2	1N	23E	7900
13541	M	Red Mountain	49°45'		114°02'	4100	1303E	WY	Grays Boundary	33	37N	112W	5900	1303E	I	Miller Side Summit	16	3N	15E	6200	1619E	I	Miller Creek Summit	2	1N	23E	7900
13542	M	Red Mountain	49°45'		114°02'	4100	1303F	WY	Grays Boundary	33	37N	112W	5900	1303F	I	Miller Side Summit	16	3N	15E	6200	1619F	I	Miller Creek Summit	2	1N	23E	7900
13543	M	Red Mountain	49°45'		114°02'	4100	1303G	WY	Grays Boundary	33	37N	112W	5900	1303G	I	Miller Side Summit	16	3N	15E	6200	1619G	I	Miller Creek Summit	2	1N	23E	7900
13544	M	Red Mountain	49°45'		114°02'	4100	1303H	WY	Grays Boundary	33	37																

Agencies Assisting with Snow Surveys, etc.

GOVERNMENT AGENCIES

Canada:

Department of Lands, Forests, and
Water Resources, British Columbia
Department of Resources and Development,
Water Resources Division

States:

Idaho State Reclamation Engineer
State of Idaho Department of Fish and Game
University of Idaho
Idaho State University
Montana Agricultural Experiment Station
Montana State Water Conservation Board
Nevada Cooperative Snow Surveys
Oregon Agricultural Experiment Station
Oregon State Engineer and Corps of
State Watermasters
Utah Cooperative Snow Surveys
Wyoming Cooperative Snow Surveys

Federal:

U. S. Army Engineers

U. S. Department of Agriculture
Forest Service
Agricultural Research Service

U. S. Department of Commerce
Weather Bureau

U. S. Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Fish and Wildlife Service
Geological Survey
Indian Service
National Park Service
Bureau of Land Management

PUBLIC UTILITIES

The Montana Power Company
Washington Water Power Company
Idaho Power Company
Utah Power and Light Company

ORGANIZED PUBLIC AGENCIES

Big Lost River Irrigation District
Boise Project Board of Control
Little Wood River Irrigation District
Jordan Valley Irrigation District
Salmon Falls Creek Irrigation Company
Twin Falls Soil Conservation District
Twin Lakes Irrigation Company
Big Wood Irrigation Company
Owyhee Project - North & South Board of Control

PRIVATE CORPORATIONS

Amalgamated Sugar Company

*Other organizations and individuals furnish valuable information for
snow survey reports. Their cooperation is gratefully acknowledged.*

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
P. O. Box 1247
BOISE, IDAHO

POSTAGE AND FEES PAID
U. S. DEPARTMENT OF AGRICULTURE

OFFICIAL BUSINESS

FIRST CLASS MAIL

Library, Current Serial Record
U.S. Department of Agriculture
Washington 25, D.C.

FEDERAL - STATE - PRIVATE
COOPERATIVE SNOW SURVEYS

Furnishes the basic data
necessary for forecasting
water supply for irrigation,
domestic and municipal water
supply, hydro-electric power
generation, navigation,
mining and industry

*"The Conservation of Water begins
with the Snow Survey"*